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(a) TITLE: CANDLE WITH CENTRAL CORE AND STACKED RINGS

(b) CROSS-REFERENCES TO RELATED APPLICATIONS

(Not Applicable)

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(c) STATEMENT REGARDING FEDERALLY-SPONSORED RESEARCH AND
DEVELOPMENT

(Not Applicable)

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(d) Reference to an appendix"

(Not Applicable)

(e) BACKGROUND OF THE INVENTION

1. Field Of The Invention

[0001] This invention relates generally candles and more specifically, a
5 multipart candle structure.

2. Description Of The Related Art

[0002] Candles have been made and used as light sources for many years.
Today however, candles are popular home furnishings, used in decorating or
10 enhancing the fragrance of an area. Candles are formed from a fuel source, usually
wax, having a consumable wick for burning. Traditionally, candles have been made
to be a single unitary structure, having the same general shape, color and fragrance
throughout the candle.

[0003] One type of candle that is popular is the pillar candle. The distance
15 between the center of the candle and the outer edge of the candle, combined with the
wax melting point, enables the center of the candle to burn without burning to the
outer edge of the candle. This combination leaves an attractive peripheral wall and
prevents molten wax from running down the side of the candle and onto the display
surface. This feature makes this candle desirable for use in a variety of locations
20 because the exterior display surface will not be damaged during burning by
overflowing wax and the candle light can show through the exterior of the candle.

[0004] U.S. Pat. No. 5,597,300 to Wohl et al. describes a method for manufacturing candles having a low melting point inner core and a high melting point outer shell. The outer shell of this candle has a solid bottom, a hollow inside and a central opening for inserting the inner core. The design of this candle is to allow for a picture to show through the outer shell when the inner core is lit. However, although the interior of this candle can be replaced, the exterior appearance of this candle is fixed and therefore can not be modified or designed by the consumer.

[0005] Since using candles as home furnishings has become popular, it is desirable to have a candle wherein the user can design his or her own candle by selecting the color or fragrance or both of the candle to match a particular décor or holiday tradition or to satisfy personal tastes or creativity.

[0006] It is therefore an object and feature of the invention to provide a candle which allows the candle to be designed with selections from, and combinations of, a diversity of colors, color combinations and fragrances all by using solid materials, thus avoiding the need to work with molten wax or other liquid candle fuel.

(f) BRIEF SUMMARY OF THE INVENTION

[0007] The invention is a candle comprising: (a) a central axial core of candle fuel, (b) a wick extending axially within the central core, and (c) a plurality of stacked rings having an opening, for receipt of the central core, the rings being

disposed around the central core. The bottom of the core may be flanged to form a base that rests on a surface for display. The periphery of the candle is preferably circular cylindrical. The rings have differing compositions, which may include different fragrances and coloring agent compositions.

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(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0008] Fig. 1 is a view in perspective illustrating a preferred embodiment of the present invention.

[0009] Fig. 2 is a view in perspective illustrating an embodiment of the present
10 invention.

[0010] Fig. 3 is a side view illustrating a cut away portion of an embodiment of the present invention.

[0011] Fig. 4 is a view in axial cross-section illustrating an alternative embodiment of the present invention.

15 [0012] Fig. 5 is a view in perspective illustrating one ring of the present invention.

[0013] Fig. 6 is a side view illustrating an alternative embodiment of the present invention.

[0014] Fig. 7 is a view in axial cross-section illustrating an alternative
20 embodiment of the present invention.

[0015] Fig. 8 is a view in perspective illustrating an alternative embodiment of the present invention.

[0016] Fig. 9 is a side view illustrating an alternative embodiment of the present invention.

[0017] In describing the preferred embodiment of the invention, which is illustrated in the drawings, specific terminology will be resorted to for the sake of clarity. However, it is not intended that the invention be limited to the specific term so selected and it is to be understood that each specific term includes all technical equivalents, which operate in a similar manner to accomplish a similar purpose.

(h) DETAILED DESCRIPTION OF THE INVENTION

10 [0018] The preferred embodiment of the present invention is illustrated in Fig. 1. The candle 10 has a central axial core 12 of candle fuel, preferably wax. A wick 14 extends axially within the central core 12 and protrudes or extends from the top 13 of the core 12 for lighting of the wick by a user. The candle 10 further includes a plurality of stacked rings 15, 16 and 17 having an opening for receipt of the central core. The rings 15, 16 and 17 are disposed around the central core 12 and preferably are slidably removable. It is preferred that the core 12 have a bottom flange extending radially to form a base 11 for resting upon a support surface. The periphery of the candle 10 as shown in Fig. 1 is circular cylindrical. However, a variety of geometrical shapes are available, such as square cylindrical or oval cylindrical.

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[0019] Many alternative compositions of the core 12 are possible. The type of wax used in the core 12 may vary. For example, gel wax, natural wax, or a

petroleum product may be used in the core 12. In the preferred embodiment, one or more of the rings 15, 16 and 17 may have a melting point substantially equal to the core 12, wherein both the rings 15, 16 and 17 and the core 12 burn, like a traditional pillar candle.

5 **[0020]** Alternatively, the core 12 alone can have qualities like those of a pillar candle, wherein the center of the core 12 can burn without burning to the outer edge of the core 12. It is the combination of the distance between the center of the core 12 and the outer edge of the core 12, combined with the wax melting point that allows this to occur. The rings 15, 16 and 17, in this alternative, have a high melting
10 point and are left intact, thus making the rings 15, 16 and 17 reusable. In addition, if the rings 15, 16 and 17 in this alternative contain a fragrance, a high melting point wax will allow the scent to last longer, because the rings 15, 16 and 17 would not burn and therefore, the fragrance would volatilized slowly and dissipated into the air. The scent would remain infused in the wax rings for a longer time enabling the user
15 to enjoy the scent for a longer period of time.

[0021] The core 12, in the preferred embodiment, extends a selected distance above an upper most stacked ring 15, which enables the user to more easily access the wick 14 for lighting. Alternatively, the core 12 can extend so that it is flush or level with the top of the upper-most ring 15.

20 **[0022]** In the preferred embodiment, the core 12 has a bottom flange that extends radially to form a base 11. The base 11 is made of wax having a melting point that is the same as the core 12 and is formed integrally or unitarily with the

core 12. If desired, a coloring agent or fragrance may be infused in the base 11 that is substantially the same as that used in the core 12.

5 **[0023]** Alternatively, the base 11 may be a separate structure from the core 12 but mounted to it, such as by the friction fit of a cylindrical core into a conforming bore in the base. The base 11 may be made of wax having a melting point higher than the core 12. In this case, when the core 12 burns down to a point near the base 11, depending on its melting point, the base 11 (a) may not burn at all, (b) may burn only a small amount, or (c) may burn to an outside wall leaving an unburned bottom surface for seating upon the support surface. In addition, the base 10 11 may have a different coloring agent or fragrance from the core 12.

15 **[0024]** As a further alternative, the core 12 and the base 11 may have different compositions. For example the base 11 may be made of a variety of non-flammable materials, such as glass, ceramic or metal, whereas the core 12 may be comprised of wax or any variety of typical candle materials. Here, the core 12 is seated within the base 11, which has a central opening for mating slidable engagement with the core 12. Alternatively, the base 11 may have a flat upper surface on which the core 12 rests and is therefore is not seated within an opening of the base 11. This enables a user to easily change the base 11 to match a particular home décor or holiday tradition.

20 **[0025]** A third alternative to the base 11 is illustrated in Figs. 2 and 3. A cut away portion of Fig. 3 illustrates the bottom 21 of the core 22 being the surface of the candle 20 that rests on a support surface (not shown) for display. Here, the

bottom 21 of the core 22 is flat for stabilizing the candle 20 on the support surface. The candle 20 is further stabilized by the bottom ring 29, which also engages the display surface.

[0026] Fig. 4 illustrates an alternative to the wax core. In the alternative,

5 the core is a solid, non-flammable container 32 having an outer wall 31 with a fuel filled inner chamber 33 containing a wick 34, which is supported by a float 34A. The candle fuel oil and the wick 34 burn to produce light, as in a conventional oil candle. The container 32 may be made of a variety of suitable non-flammable solid materials, including metal, ceramic or glass. A variety of suitable fuel sources like
10 those typically used in candles, including candle fuel oil, may be used in the inner chamber 33. In addition, the oil may be infused with a fragrance, or a coloring agent, may be added to match a particular home décor or holiday tradition.

[0027] Fig. 5 is an exploded view of the ring 15. The ring 15 has engaging axially spaced ends 18 and 19, which have mating surface contours for congruent
15 connection between the rings 15 and 16. Rings 16 and 17 also have corresponding ends, not shown in detail here. The upper end 18 and the lower end 19 of the ring 15 are flat in the preferred embodiment. However, the ends 18 and 19 may be saw-toothed or a variety of other engageable end surfaces. Alternatively, the ring 15 may have ends that are not matingly engageable with other ring end surfaces.

20 [0028] The ring 15 has an opening 7, which has a diameter substantially equal to an outside diameter of the central core 12 for mating, slidable engagement along the core 12. Alternatively, the ring 15 can have an opening that has a diameter

that is larger than the outside diameter of the core 12. For example, the diameter of the ring opening 7 may be very large in proportion to the outside diameter of the core 12, which may be very small.

[0029] There are many possible variations to the ring composition. The rings 5 15, 16 and 17 are made of wax in the preferred embodiment. However, the rings 15, 16 and 17 can be made of a variety of other flammable materials used in candles, including gel wax. The rings 15, 16 and 17 may also be made of a variety of non-flammable materials, such as ceramic or glass composite.

[0030] The rings 15, 16 and 17 may have different coloring agent 10 compositions. There are a wide variety of coloring agents available for use in adding color to candles. It is common to use primary colors or any combination thereof, to create a variety of colored candles. Each candle 10 may be assembled having rings 15, 16 and 17 of differing coloring agent compositions. Additionally, the candle 10 may be assembled using rings 15, 16 and 17 having coloring agent compositions that 15 are substantially the same. This allows the user to create a color scheme to match any room décor, holiday season or to make a candle 10 using a combination of one's favorite colors.

[0031] The rings 15, 16 and 17, like most candle waxes may be translucent so that the light is diffused through the rings. The rings 15, 16 and 17 can also be 20 transparent, wherein light is transmitted without appreciable scattering.

[0032] Scented oil may be infused into the wax to give the rings 15, 16 and 17 a fragrance. The oil infused wax when heated is volatilized, releasing the scent

into the air. Each of the rings 15, 16 and 17 may have a fragrance different from the other rings so that the fragrance changes as the candle burns down. For example one ring may smell like cinnamon, another like vanilla, and a third like blueberry. These of course are only a few examples of fragrances available. A variety of fragrances
 5 may be used to scent the rings 15, 16 and 17. Additionally, the rings 15, 16 and 17 may all have fragrances that are similar, thereby giving off a single scent. Having a variety of fragrance options enables the user to assemble a candle 10 that caters to his or her favorite scent(s).

[0033] The radial thickness of the rings 15, 16 and 17 may vary, ranging
 10 from very thin to very thick. The rings 15, 16 and 17 may range in radial thickness from having little thickness, wherein the outside wall 6 is in close proximity to the inner wall 5 to very thick rings 15, 16 and 17, having an outside wall 6 that is a radial distance quite distant from the inner wall 5. The radial thickness may vary in accordance with the type of material used in creating the rings 15, 16 and 17.

15 [0034] The axial thickness or height of the rings 15, 16 and 17 may also vary. The rings 15, 16 and 17 may range in axial thickness from having little thickness, appearing almost flat when viewed from the side, to being very thick, the rings 15, 16 and 17 appearing to be as wide as they are tall. The axial thickness of the rings 15, 16 and 17 can also vary in a single candle wherein one ring can be very thin, a
 20 second can be of medium thickness and a third can be very thick.

[0035] The rings 15, 16 and 17 in the preferred embodiment are solid circular cylinders with a central opening. However, the rings 15, 16 and 17 may be congruent

discontinuous segments, each segment being engageable with a next segment to form a ring. For example, one segment could be 270° of a full ring and a second segment could make up the remaining 90° of a full ring, so that when the segments are engaged, the ring is complete. The segments may also be interlocking, wherein each segment has a notch or opening for interlocking with another segment to form a ring. The segments may differ in their composition provided they are engageable.

[0036] As illustrated in Fig. 6, the periphery of the rings 45, 46 and 47 is substantially in conformity with the periphery of the base 41. Having the two peripheries substantially the same brings uniformity to the candle 40. Alternatively, the base 41 may have a differing periphery from the rings 45, 46 and 47, wherein the periphery of the base 41 extends past the periphery of the rings 45, 46 and 47. Further, the periphery of the rings 45, 46 and 47 may extend past the periphery of the base 41.

[0037] An axial cross-sectional view of at least one ring 56 is illustrated in Fig. 7. Here, the ring 56 has a recessed cavity 51 that matingly engages the base 41. This allows the base 41 to be hidden from view, while maintaining the mating engagement and uniformity of the rings 56 and 57.

[0038] An alternative to the preferred embodiment is shown in Fig. 8. Here, the periphery of the rings 65, 66 and 67 and the core 62 is square cylindrical. However, the core 62 and the rings 65, 66 and 67 may have different peripheries. For example, the core 62 may have a circular cylindrical periphery, while the rings 65, 66 and 67 have a square cylindrical periphery. The rings 65, 66 and 67 being

engageable with the core 62, enables a user to interchange the core 62 and the rings 65, 66 and 67, regardless of their peripheries.

[0039] Fig. 9 illustrates an alternative to the preferred embodiment, wherein the proportional relationship between the radius of the core 70 as compared to the axial thickness of the rings 73-80 provides a very different aspect ratio than the other illustrated embodiments. As illustrated, the diameter of the core 70 is very thick compared to the axial thickness of the rings 73-80, which is proportionally thinner. However, the diameter of the core 70 may be thin and the axial thickness of the rings 73-80 may be proportionally thicker as illustrated in Fig. 1.

[0040] While certain preferred embodiments of the present invention have been disclosed in detail, it is to be understood that various modifications may be adopted without departing from the spirit of the invention or scope of the following claims.